

PATENT CLAIMS

1. Device (1) for providing map information data (3) interactively to a display unit (5) operated by a user;
-the device (1) comprising a processor (7) and a memory
5 (9) comprising a map information database (11);
-the map information database (11) comprising map information data (3) representing geographical features, the map information data (3) being based on aggregations of at least one of nodes (15), links (17) and rings (19),
10 each one of which corresponding to geographic features, offering a number of resolution levels, where
-the map information data (3) of a higher resolution level comprises additional map information data, resulting in more detailed map
15 information (3) presented on the display unit (5), compared to the map information data (3) of a lower resolution level, and
-the map information data (3) of a higher resolution level being generated by enhancement
20 of the map information data (3) of a lower resolution level combined with the additional data, the enhancement being based on disaggregation of at least one of the nodes (15), links (17) and rings (19);
25 the processor (7) being configured for:
-receiving from the user a request for map information data (3);
-providing to the display unit (5), in the case of the request being a first request, map information data (3)
30 at a predetermined resolution level and, in the case of the request being subsequent request, map information data (3) at a higher resolution level.

2. Device according to claim 1, wherein the predetermined resolution level corresponds to the lowest resolution level.

5 3. Device according to claim 1, wherein the processor (7) is further configured for, in the case of the request being subsequent request, providing map information data (3) at a lower resolution level.

10 4. Device according to claim 1, wherein, in the case of the request being subsequent request, the difference in resolution level between a presently provided map information data (3) and a previously provided map information data (3) is 1, or greater than 1.

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5. Device according to claim 1, further comprising communication means (23) and wherein the memory (9) comprising the map information database (11) is remotely located and accessible using the communication means
20 (23).

6. Device according to claim 1, further comprising communication means (23) and wherein the database (11) is arranged in memories (7) at two locations, in which lower
25 resolution levels are arranged in one memory (7) and higher resolution levels are arranged in the other memory (7).

7. Device according to claim 1, wherein the display unit
30 (5) is constituted by a computer screen.

8. Device according to claim 1, further comprising communication means (23) between the device (1) and the display unit (5), and the display unit (5) being constituted by one of a cell phone, personal digital assistant (PDA), and a navigator.

9. A map information data carrier to be used in a device for providing map information data, comprising a map information database (11) comprising map information data (3) representing geographical features, the map information data (3) being based on aggregations of at least one of nodes (15), links (17) and rings (19), each one of which corresponding to geographic features, offering a number of resolution levels, where

15 -the map information data (3) of a higher resolution level comprises additional map information data (3), resulting in more detailed map information presented on the display unit (5), compared to the map information data (3) of a lower resolution level, and

20 -the map information data (3) of a higher resolution level being generated by enhancement of the map information data (3) of a lower resolution level combined with the additional data, the enhancement being based on disaggregation of at least one of the nodes (15), links

25 (17) and rings (19).

10. Device for providing map information data to a planning apparatus (33) for planning at least one of locations of society facility and travel routes;

30 -the device (31) comprising a processor (7) and a memory (9) comprising a map information database (11);

-the map information database (11) comprising map information data (3) representing geographical features,

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the map information data (3) being based on aggregations of at least one of nodes (15), links (17) and rings (19), each one of which corresponding to geographic features, offering a number of resolution levels, where

- 5 -the map information data (3) of a higher resolution level comprises additional map information data, resulting in more detailed map information, compared to the map information data (3) of a lower resolution level, and
- 10 -the map information data (3) of a higher resolution level being generated by enhancement of the map information data (3) of a lower resolution level combined with the additional data, the enhancement being based on
- 15 disaggregation of at least one of the nodes (15), links (17) and rings (19);

the processor (7) being configured for:

- receiving from the user a request for map information data (3);
- 20 -providing to the planning apparatus (33), in the case of the request being a first request, map information data (3) at a predetermined resolution level and, in the case of the request being subsequent request, map information data (3) at a higher resolution level.

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